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Gilles Fonteneau

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EXAMINER

LAZORCIK, JASON L

ART UNIT

PAPER NUMBER

1791

MAIL DATE

DELIVERY MODE

03/19/2009

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/518,820	<b>Applicant(s)</b> FONTENEAU ET AL.	
	<b>Examiner</b> JASON L. LAZORCIK	<b>Art Unit</b> 1791	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 09 December 2008.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1 and 14-23 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 14-23 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

**DETAILED ACTION**

***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1, 14-23 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 recites the limitation "the other parts of the first container" in lines 12 and 15 and the limitation "the other parts of the second container" in lines 14 and 17. There is insufficient antecedent basis for this limitation in the claim and one of ordinary skill in the art would not necessarily be apprised of the particular metes and bounds of Applicants invention. For purposes of examination, the Examiner construes the claimed "the other parts" of the first and second containers as any part or portion of the respective container.

Claims 18 and 19 both recite the limitation "the vertical" in line 2. There is insufficient antecedent basis for this limitation in the claim.

Applicant is further advised that claim 1 recites several structural limitations couched in intended use language. Specifically said claim indicates that the chamber is "capable of occupying two positions", namely a first position and a second position. Further, the relative positioning of the first and second orifices with respect to "other

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parts” of the respective first and second containers are defined by this containers orientation in these first and second positions. On this matter, the MPEP §2113 states that;

“a claim containing a “recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus” if the prior art apparatus teaches all the structural limitations of the claim. *Exparte Masham*, 2 USPQ2d 1647 (Bd. Pat. App. & Inter. 1987)

With respect to the foregoing, it is understood by the Examiner that the interrelation of elements and the broader structure defined by this interrelation of elements is dependent upon the ability of the claimed chamber to occupy the two positions (e.g. a first position and a second position). The noted antecedent basis issues notwithstanding, it is the Examiners’ position that the nexus between claimed chamber elements as set forth by the present claim language, namely the first and second orifices, is indefinite by virtue of being dependent upon a use of the structure.

That is, an interpretation of the precise limits of the structure claimed by Applicant is subject to a particular use of the structure. Since the claimed structure is relative based upon the claimed use, it follows that the particular metes and bounds of Applicants claimed invention are rendered unclear and indefinite and one of ordinary skill in the arts would not necessarily be apprised of the scope of Applicants invention.

Similar deficiencies regarding structural limitations dependent upon a stated intended use of the chamber are noted in **claim 17**, lines 4-6; **claim 18**, lines 2-3; **claim 19**, lines 2-3; **claim 20**, lines 3-4. All of the identified claims present further structural limitations dependent upon the first and second positions.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

**Claims 1, 14, 15, 20, 21, and 22 are rejected under 35 U.S.C. 102(b) as anticipated by Mitachi et al (Japanese Patent publication JP 60-176938 A).**

Regarding independent **Claim 1** and with particular reference to the embodiment depicted in the instant reference figures 4a-d (see annotated figure 4a excerpt below), Mitachi teaches a chamber comprising a substantially closed first container (13) which comprises at least one “first orifice” in the region of lead line (15). A substantially closed second container (12) is positioned inside and is integral with the first container. As noted in the figure, a “second orifice” connects the second container to a first end of “a conduit”, which conduit is understood to be integral to said second container. This conduit further comprises a “second open end”, as noted, which is inside the first container and which is aligned with and at a distance from said first orifice.

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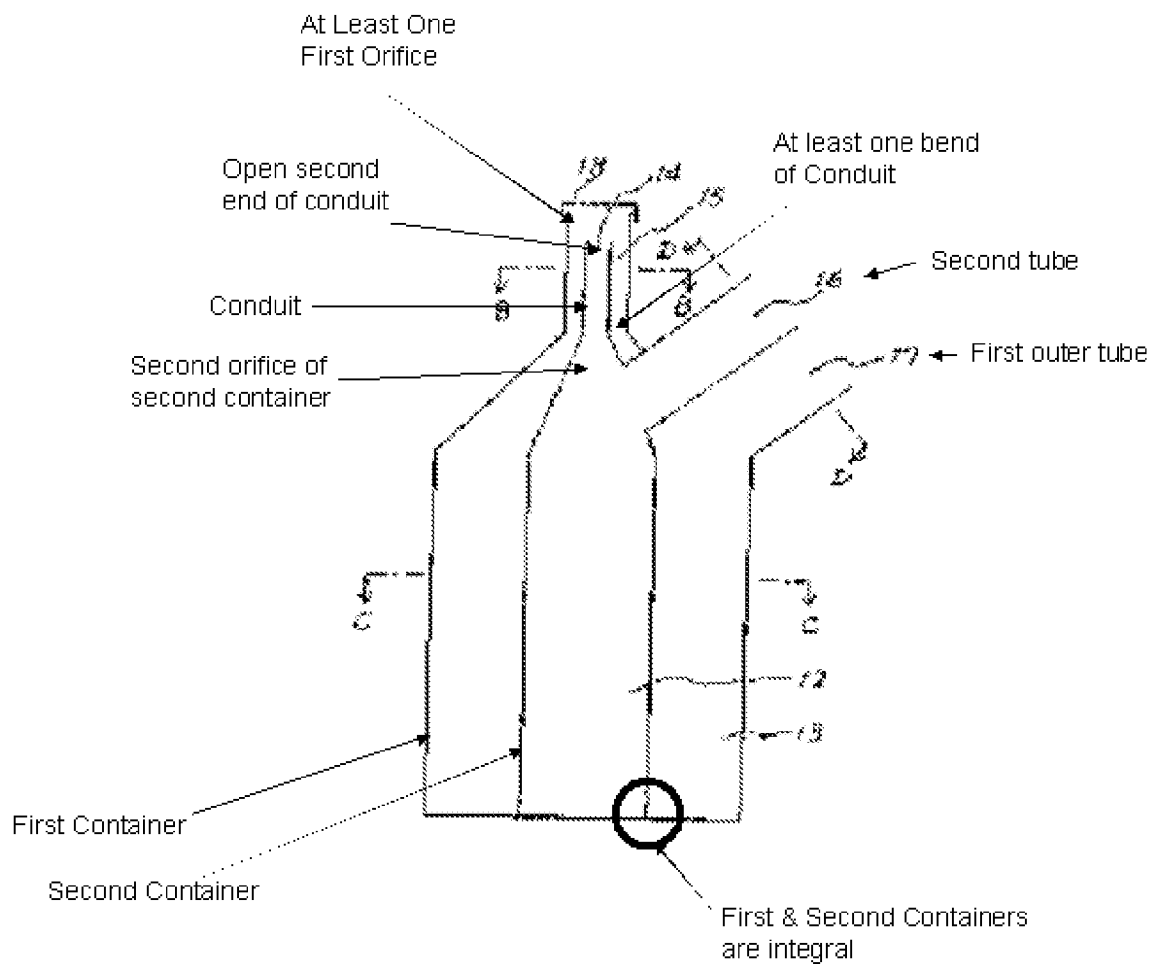
Regarding **Claim 14**, the second container and conduit are inside the first container (see fig. 4 excerpt below)

Regarding **Claim 15**, the conduit comprises at least one bend as noted in the figure 4 excerpt

Regarding **Claim 20**, Mitachi teaches a first outer tube (17) as noted in the figure 4 excerpt below

Regarding **Claim 21**, Mitachi teaches a second tube (16) as noted in the figure 4 excerpt.

Regarding **Claim 22**, it is understood by the Examiner that the first container, second container, and conduit collectively define "a closed assembly" in the broadest reasonable construction of the term.

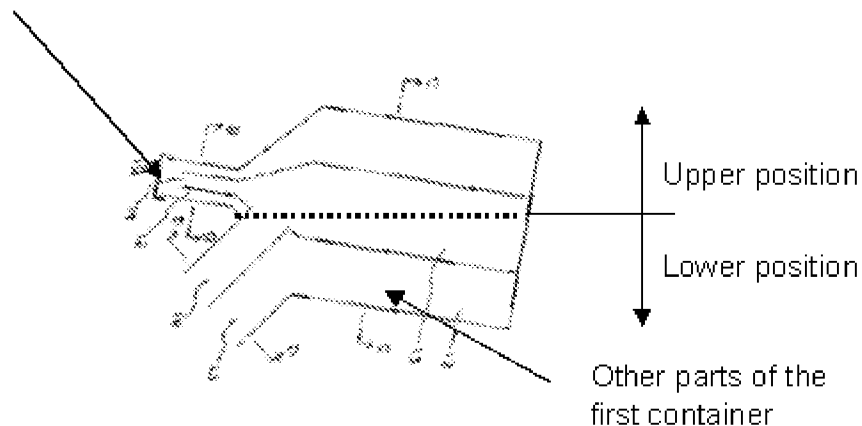


Regarding the recited first and second positions, the Mitachi apparatus is construed to teach a first position in which the first orifice is in an upper position relative to the other parts of the first container, and wherein the second orifice is in a lower position relative to other parts of the second container according to the following:

## FIRST POSITION

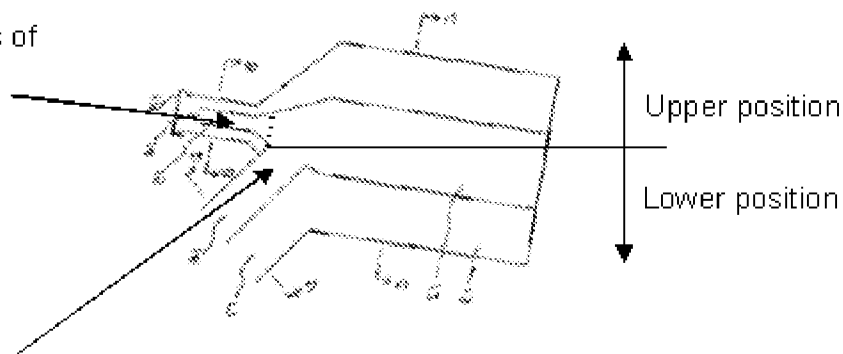
First orifice in upper position relative to other parts of the first container

At Least One  
First Orifice



Second orifice in lower position relative to other parts of the second container

Other parts of  
the second  
container



Second orifice of  
second container

Regarding the recited second position, the Mitachi apparatus is construed to be capable of being oriented in a second position wherein the first orifice is in a lower position relative to the other parts of the first container, wherein the second orifice is in

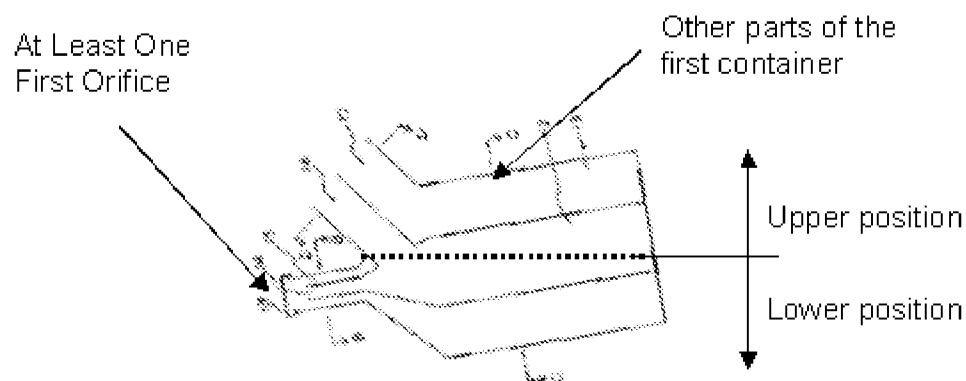


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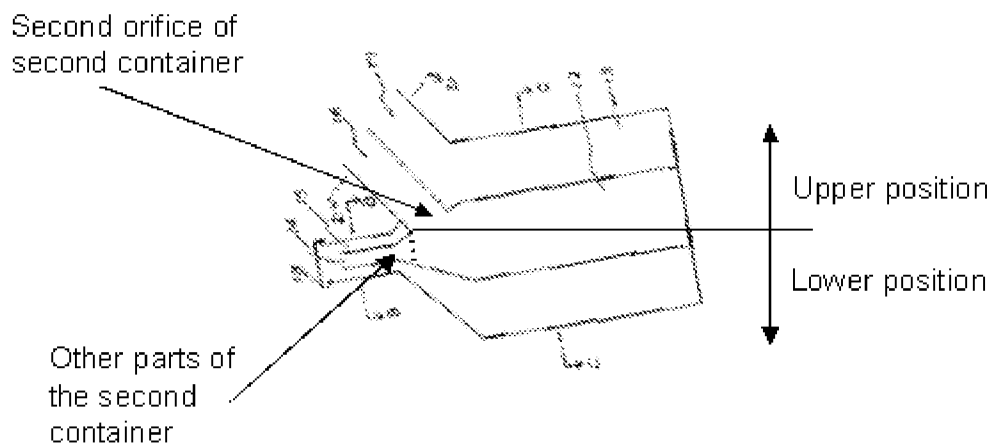
an upper position relative to the other parts of the second container, and wherein the open end of the conduit is aligned with and at a distance from the first orifice according to the following:

## SECOND POSITION

First orifice in lower position relative to other parts of the first container



Second orifice in upper position relative to other parts of the second container



In view of the foregoing annotated excerpt figures from the Mitachi reference, it will appear self evident that the disclosed apparatus teaches an apparatus which reads upon each and every structural limitation of the apparatus as recited in Applicants claimed invention.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over Mitachi et al (Japanese Patent publication JP 60-176938 A) in view of Sanghera et al ( US 5,779,757).

Applicant is advised that a complete English language translation of the Mitachi reference was not available as of the date of this Official communication. As such, a determination of the preferred materials of construction for the Mitachi chamber was not

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possible. The Examiner therefore proceeds under the operating assumption that Mitachi is silent regarding the limitation set forth in pending claim 23 wherein it is required that "said containers, conduit, and tubes are made of silica or Pyrex glass".

The Sanghera reference teaches a closely related reaction chamber for melt processing of glass compositions for preparing optical fiber preforms. The dual chamber apparatus disclosed by Sanghera is preferably constructed from quartz glassware or silica (col. 6, line 59). In view of the Sanghera reference, it would have been obvious for one of ordinary skill in the art to fabricate a double crucible preform reactor from quartz glass material. Similarly one of ordinary skill in the arts would recognize quartz or silica glass as an obvious material for construction of the Mitachi chamber. Specifically, methods for working glass materials into complex forms like that of the Mitachi chamber are well established in the arts and quartz glass materials couple the benefit of elevated operating temperatures with a decreased risk of optical fiber preform materials.

#### ***Allowable Subject Matter***

The indicated allowability of claims 15, 17-18 and 20-23 in the Official Action dated December 19, 2007 is withdrawn in view of the newly discovered reference(s) to Mitachi. Rejections based upon the new reference are set forth above.

Claims 16 to 19 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

### ***Response to Arguments***

#### ***Rejection of claims under 35 U.S.C. §112, second paragraph***

In response to the rejection of claims 1 and 14-23 under 35 U.S.C. §112, second paragraph, Applicant cites MPEP §2114 asserting that apparatus or product claims cover what a device is, not what a device does. Applicant next alleges that describing the spatial relationship of structural elements in terms of their location, spacing, orientation, and/or direction in relation to one another does not cause a claim to no longer be defined in terms of their structural characteristics. Applicant concludes that “regardless of how the claimed reaction chamber is used, the structural characteristics and spatial relationships recited in claim 1 ... are not dependent on the use of the reaction chamber”.

On this point, the Examiner strongly disagrees.

Specifically, the Examiner does not contest that elements of a structure when described in terms of their relative positioning is not per se indefinite, rather it is precisely the method in which Applicant recites this relative positioning of elements which renders the claim indefinite. That is, Applicant relates the chamber structure by stating that the chamber is “capable of occupying two positions”. The precise structure envisioned by Applicants claim and the relative positioning of the elements which

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constitute the reaction chamber are necessarily depend upon the ability of the reactor to exist in the stated first and second positions positioning and for this reason the precise structure of the claimed chamber is construed to be dependent upon the use of the chamber.

Although Applicant alleges that “regardless of how the claimed reaction chamber is used, the structural characteristics and spatial relationships recited in claim 1 ... are not dependent on the use of the reaction chamber”, Applicants claim language directly contradicts this assertion. Specifically, it is precisely the method of using the chamber to occupy respective first and second positions which dictates the relative positioning of reactor elements. Applicants definition of the reactor structure does not constitute a definite structure, but rather an indefinite and unclear range of structures which depend upon ill defined first and second positions.

The issue at hand is not whether the claim language describes Applicants disclosed structure, rather the question is what range of structures are encompassed by Applicants claim language and whether one of ordinary skill in the art would reasonably be apprised of the precise metes and bounds of Applicants recited invention. It is evident that Applicants stated first and second positions impart some further structural limitations for the relative positioning of elements in the claimed reaction chamber, but the extent of Applicants claim is in no manner evident to the Examiner.

It therefore follows that the particular metes and bounds of Applicants claimed invention are rendered unclear and indefinite and one of ordinary skill in the arts would not necessarily be apprised of the scope of Applicants invention.

Rejection of claims under 35 U.S.C. §102(b)

Applicants argument (see pages 10-12) regarding the rejection of claims under 35 U.S.C. §102(b) have been carefully considered but are deemed moot for reasons made explicit in the grounds of rejection as presented above.

**Conclusion**

1. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JASON L. LAZORCIK whose telephone number is (571)272-2217. The examiner can normally be reached on Monday through Friday 8:30 am to 5:00pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven Griffin can be reached on (571) 272-1189. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Steven P. Griffin/  
Supervisory Patent Examiner, Art  
Unit 1791

/J. L. L./  
Examiner, Art Unit 1791